IN THE CLAIMS:

1. (previously presented) In a IEEE 802.11 network, a method for periodic stream admission control, the method comprising:

at an access point (AP), receiving a transmit specification, including a requested bandwidth, from a quality of service station (QSTA);

converting transmit specification parameters into time;

computing T_{temp}, the transmission time equivalent to the requested bandwidth;

computing T_{all}, the transmission time already allocated; [[and,]]

computing T_{res}, the total transmission time available;

if $T_{temp} + T_{all} < T_{res}$, admitting the QSTA; and,

if $T_{temp} + T_{all} > T_{res}$, not admitting the QSTA.

2. canceled

3. (previously presented) The method of claim 1 wherein computing T_{temp} includes computing Ttxop, the duration of the transmission opportunity in each poll in response to:

the network physical layer (PHY) parameters;

the duration of the poll frame (Tpoll);

the probability of pollframe transmission success (q2); and,

the duration of each transmission (Ttx).

4. (original) The method of claim 3 wherein the network PHY parameters include:

the short interframe spacing (Tsifs);

the PCF interframe spacing (Tpifs); and,

the slot duration (Tslot).

5. (original) The method of claim 4 wherein the Tpoll is calculated in response to the:

duration of the preamble (Tpreamble);

the time occupied by the signal field in the PLCP header on the channel (Tsignal); and,

the duration of the OFDM symbol (Tsymbol).

6. (original) The method of claim 5 wherein Tpoll is calculated as follows:

Tpoll = Tpreamble + Tsignal + ceiling (8(dpoll + 3)/RTsymbol)Tsymbol;

where dpoll is the number of bytes in the quality of service (QoS) poll frame; and,

where R is the PHY data rate in bites per second.

7. (original) The method of claim 6 wherein Ttxop is calculated as follows:

(Tpifs + Tpoll + Tsifs + q2Ttx + (1-q2)Tslot)/q2.

8. (original) The method of claim 7 further comprising:

transmitting a transmit stream (Tstream) to the QSTA responsive to the calculated value of Ttxop.

9. (original) The method of claim 8 further comprising:

establishing an immediate acknowledgement (ACK) network policy; and,

wherein transmitting a Tstream to the QSTA responsive to the calculated value of Ttxop includes transmitting Tstream as follows:

Tstream = (npoll)(Ttxop);

where npoll = T/polling interval; and

T = the duration of a transmission period.

10. (original) The method of claim 8 further comprising:

establishing a burst ACK network policy; and,

wherein transmitting a Tstream to the QSTA responsive to the calculated value of Ttxop includes transmitting Tstream as follows:

Tstream = (npoll)(Ttxop);

where npoll = T/polling interval;

T = the duration of a transmission period; and,

where Ttxop includes a data (Ttxop,d) and an acknowledgement (Ttxop,a) stream.

11. (original) The method of claim 10 wherein Ttxop,d is calculated as follows:

$Ttxop,d = (Tpifs + Tpoll + Tsifs + q2Ttx,d + (1-q2)Tslot)/q2;$

where Ttx,d is the duration of the Ttxop assigned to data streams; and,

wherein Ttxop,a is calculated as follows:

$Ttxop,a = (Tpifs + Tpoll + Tsifs + q2Ttx,a + (1-q2)Tslot)/q2;$ and,

where Ttx,a is the duration of the Ttxop assigned to acknowledgement streams.

12. (previously presented) The method of claim 1 further comprising:

monitoring the bandwidth of the admitted QSTA.

13. (previously presented) The method of claim 1 further comprising:

determining the bandwidth required by the admitted QSTA; and,

modifying the bandwidth of the admitted QSTA in response to the determined QSTA requirements.

14. (previously presented) The method of claim 1 further comprising:

monitoring channel conditions; and,

modifying the bandwidth of the admitted QSTA in response to the channel conditions.

15. (previously presented) In a IEEE 802.11 network, a system for periodic stream admission control, the system comprising:

a quality of service station (QSTA) having a transceiver port to communicate a request for admission to a periodic communication stream at a requested bandwidth using a transmit specification TSPEC; and,

a hybrid coordinator (HC), having a controller with a transceiver port to receive the TSPEC from the QSTA, to convert TSPEC parameters into time, to compute T_{temp}, the transmission time equivalent to the requested bandwidth, T_{all}, the transmission time already allocated, T_{res}, the total transmission time available, the controller admitting the QSTA if $T_{temp} + T_{all} < T_{res}$, and refusing admission to the QSTA if $T_{temp} + T_{all} > T_{res}$.

16. canceled

17. (currently amended) The system of claim [[16]] 15 wherein the controller's computation of T_{temp} includes computing T_{txop}, the duration of the transmission opportunity in each poll, in response to:

the network physical layer (PHY) parameters;

the duration of the poll frame (Tpoll);

the probability of pollframe transmission success (q2); and, the duration of each transmission (Ttx).

18. (original) The system of claim 17 wherein the network PHY parameters include:

the short interframe spacing (Tsifs);

the PCF interframe spacing (Tpifs); and,

the slot duration (Tslot).

19. (original) The system of claim 18 wherein the controller calculates Tpoll in response to the:

duration of the preamble (Tpreamble);

the time occupied by the signal field in the PLCP header on the channel (Tsignal); and,

the duration of the OFDM symbol (Tsymbol).

20. (original) The system of claim 19 wherein the controller calculates Tpoll as follows:

Tpoll = Tpreamble + Tsignal + ceiling (8(dpoll + 3)/RTsymbol)Tsymbol;

where dpoll is the number of bytes in the quality of service (QoS) poll frame; and,

where R is the PHY data rate in bites per second.

21. (original) The system of claim 20 wherein the controller calculates Ttxop as follows:

(Tpifs + Tpoll + Tsifs + q2Ttx + (1-q2)Tslot)/q2.

22. (original) The system of claim 21 wherein the controller communicates admission to the QSTA by transmitting a transmit stream (Tstream) to the QSTA responsive to the calculated value of Ttxop.

23. (original) The system of claim 22 wherein the controller responds to each QSTA transmission with an immediate acknowledgement (ACK) protocol and transmits a Tstream as follows:

Tstream = (npoll)(Ttxop);
where npoll = T/polling interval; and
T = the duration of a transmission period.

24. (original) The system of claim 22 wherein the controller responds to QSTA transmissions with a burst ACK protocol and transmits a Tstream as follows:

Tstream = (npoll)(Ttxop);
where npoll = T/polling interval;
T = the duration of a transmission period; and,
where Ttxop includes a data (Ttxop,d) and an acknowledgement (Ttxop,a) stream.

25. (original) The system of claim 24 wherein the controller calculates Ttxop,d as follows:

Ttxop,d = (Tpifs + Tpoll + Tsifs + q2Ttx,d + (1-q2)Tslot)/q2;

where Ttx,d is the duration of the Ttxop assigned to data streams; and,

wherein Ttxop,a is calculated as follows:

Ttxop,a = (Tpifs + Tpoll + Tsifs + q2Ttx,a + (1-q2)Tslot)/q2;

and,

where T_{tx},a is the duration of the T_{txop} assigned to acknowledgement streams.

26. (previously presented) The system of claim 15 wherein the controller monitors the bandwidth of the admitted QSTA.

27. (previously presented) The system of claim 15 wherein the controller determines the bandwidth required by the admitted QSTA and modifies the bandwidth of the admitted QSTA in response to the determined QSTA requirements.

28. (previously presented) The system of claim 15 wherein the controller monitors channel conditions and modifies the bandwidth of the admitted QSTA in response to the channel conditions.